

Claims:

1. An OLED structure, comprising:
at least one substantially flexible substrate;
at least one barrier layer disposed between the substrate and the OLED structure;
and at least one antireflection (AR) layer disposed between the OLED structure and a display surface.
2. An OLED structure as recited in claim 1, wherein another substantially flexible substrate is disposed over the at least one barrier layer.
3. An OLED structure as recited in claim 1, wherein the at least one AR layer includes a barrier structure.
4. An OLED structure as recited in claim 1, wherein the at least one barrier layer includes at least one stack comprised of a dielectric layer and a light absorbing layer.
5. An OLED structure as recited in claim 4, wherein the at least one barrier layer includes up to ten of the stacks.
6. An OLED structure as recited in claim 1, wherein respective dielectric layers are disposed between the at least one AR layer and the OLED structure, and between the at least one barrier layer and the OLED structure.
7. An OLED structure as recited in claim 2, further comprising a hydrophobic layer between the other substrate and the at least one barrier layer.
8. An OLED structure as recited in claim 2, further comprising a hydrophobic layer between substrate and the OLED structure.

9. An OLED structure as recited in claim 4, wherein the light absorbing layer is a metal.
10. An OLED structure as recited in claim 1, wherein the at least one barrier layer includes: a dielectric layer having a thickness equal to one quarter wavelength of a visible wavelength; a light reflecting layer; and a light absorbing layer.
11. An OLED structure as recited in claim 10, wherein the light absorbing layer is a metal, and the light reflecting layer is a mirror.
12. An OLED structure as recited in claim 5, wherein the dielectric layers each have a mechanical stress, and the light absorbing layers have a mechanical stress, and the mechanical stress of the dielectric layers and the light absorbing layer substantially cancel.
13. An OLED structure as recited in claim 1, wherein the barrier structure and the at least one barrier layer water vapor each prevent permeation water vapor therethrough at a rate less than approximately 10^{-6} g/m²/day and oxygen therethrough at a rate less than approximately 10^{-5} cm³/m²/day.
14. A light emitting display device, comprising:
at least one substantially flexible substrate;
at least one barrier layer disposed between the substrate and a light emitting structure;
and at least one antireflection (AR) layer disposed between the light emitting structure and a display surface.
15. A light emitting display device as recited in claim 14, wherein the AR layer includes a barrier structure.

16. An light emitting display device as recited in claim 14, wherein another substantially flexible substrate is disposed over the at least one barrier layer.

17. A light emitting display device as recited in claim 14, wherein the at least one barrier layer includes at least one stack comprised of a dielectric layer and a light absorbing layer.

18. A light emitting display device as recited in claim 17, wherein the at least one barrier layer includes up to ten of the stacks.

19. A light emitting display device as recited in claim 17, wherein respective dielectric layers are disposed between the at least one AR layer and the light emitting structure, and between the at least one barrier layer and the light emitting structure.

20. A light emitting display device as recited in claim 15, further comprising a hydrophobic layer between the other substrate and the at least one barrier layer.

21. A light emitting display device as recited in claim 15, further comprising a hydrophobic layer between substrate and the light emitting structure.

22. A light emitting display device as recited in claim 17, wherein the light absorbing layer is a metal.